

# Equity in Care Could Save More Lives Than Technological Advances

In the US health care system, far more money is spent on developing new medical advances than on eliminating racial disparities.

REVIEWED BY STEVEN H. WOOLF, MD, MPH

**E**liminating racial disparities in the treatment of whites and blacks could save five times as many lives as technological advances in medical treatment.

According to a report in the *American Journal of Public Health*, from 1991 to 2000 medical advances averted 176,633 lives – but equalizing the mortality rates of whites and blacks would have averted 886,202 deaths. “The US health system spends far more on the technology of care than on achieving equity in its delivery,” said Steven H. Woolf, MD, MPH, professor of family medicine, preventive medicine and community health at Virginia Commonwealth University in Fairfax.

Dr. Woolf and colleagues performed what they termed a “thought experiment” to compare the number of lives saved through the two strategies: Does society save more lives by enhancing the technology of care or by resolving disparities?

## IMPROVING TECHNOLOGY OF CARE

Researchers looked at data for 1991 to 2000 from the National Center for Health Statistics. They estimated the number of deaths averted by improving the technology of care and the number of avoidable deaths had blacks experienced the age-adjusted mortality rates of whites (Figure 1).

“Our crude measure of the benefit of medical advances was declines in age-adjusted mortality rates,” Dr. Woolf and colleagues wrote. “Such declines stem from multiple factors, not just improved technology, but we gave full credit to the latter to define the maximum number of averted deaths that could be attributed to this endeavor.”

Dr. Woolf and colleagues performed an indirect stan-

A total of 886,202 lives could have been saved if mortality rates of whites and blacks were equalized.

ardization of mortality rates by multiplying the population by the difference between the crude mortality rate for each year and a recalculated age-adjusted rate figuring in no improvement in mortality rates. This was derived by multiplying age-specific populations by the corresponding age-specific mortality rates from the previous year, and then dividing by the total population.

## INDIRECT STANDARDIZATION

In order to determine the number of deaths among blacks that were attributable to higher mortality rates, the researchers performed an indirect standardization of mortality rates and used the blacks’ as a reference. Again, for each calendar year and by gender, they multiplied the white age-specific mortality rate by the population of blacks in the corresponding age groups.

By dividing the total calculated deaths by the black population, researchers arrived at a hypothetical, crude gender-specific mortality rate. They subtracted this rate from the actual black crude mortality rate and multiplied by the total population of blacks to estimate the number of avertable deaths in that year.

## OVERALL MORTALITY RATES

The overall decline in age-adjusted mortality rates was about 0.7% per year. Using the calculation method

described, that accounted for 176,633 deaths averted from 1991 to 2000. "During the same years, age-adjusted mortality rates for white males and females were an average of 29% and 24% lower, respectively, than those for African-Americans," Dr. Woolf said.

For black infants and adults aged 25 to 54 years, the mortality rate was more than double that of whites as of 2000. "Had the age-specific mortality rates of the two races been comparable during 1991 to 2000, our calculations suggested that 886,202 deaths could have been averted," Dr. Woolf said.

**FORMIDABLE PREMISE**

The investigators summarized that while improvements in medical care technology saved lives during the time period studied, the number of deaths averted was considerably fewer than the potential lives saved by reducing the mortality rate disparity. They noted that abolishing racial disparities is a formidable premise requiring the overcoming of immense societal challenges.

Researchers wrote that, with this study, their intent was to offer policymakers a sense of perspective about how the potential gains from overcoming these chal-

lenges would compare with continued investment in the technology of care.

Immense challenges in society must be overcome in order to abolish racial disparities.

The authors noted the limitations of their study, including the focus on mortality only, and the fact that other variables and not just medical care influence mortality. The analysis only dealt with two races, excluding the disparities experienced by others. "Lives might also be saved by reducing the mortality rates of whites to that of Hispanics or Asian-Americans," they wrote.

"Socioeconomic conditions represent a more pertinent cause of disparities than race. An intriguing question is whether more lives are saved by medical advances or by solving social inequities in education and income."

**FUNDAMENTAL FINDING**

The authors said that regardless of the study's shortcomings, further work to explore all of these issues will unlikely alter the fundamental finding that resolving the causes of the higher mortality rates among blacks can save more lives than perfecting the technology of care. It is important for policymakers to consider acting on this information without precise projections. "The prudence of investing billions in the development of new drugs and technologies while only investing a fraction of that amount in the correction of disparities deserves reconsideration," Dr. Woolf said. ■

*Steven H. Woolf, MD, MPH, is a professor in the departments of family medicine, preventive medicine and community health, Virginia Commonwealth University. He can be reached at [swoolf@vcu.edu](mailto:swoolf@vcu.edu).*

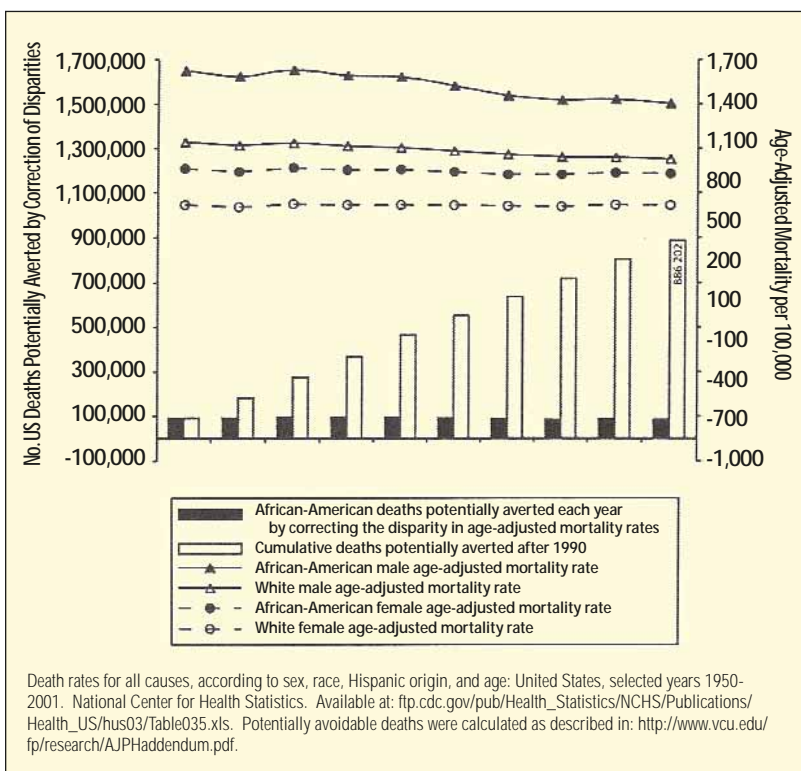


Figure 1. The difference in mortality rates of whites and African-Americans, after adjustment for age, from 1991 to 2000, and the potential number of lives saved with comparable mortality rates.

Woolf SH, Johnson RE, Fryer GE, et al. The Health Impact of Resolving Racial Disparities: An Analysis of US Mortality Data. *Am J Public Health*. 2004;94:2078-2081.